

SPACE & MISSILE DEFENSE
BATTLE LAB

SAMPLE TASK 03

1. CONTRACTOR NAME AND ADDRESS:

STARS CONTRACTOR
TO BE COMPETED

2. CONTRACT NO. DASG62-01-D-XXXX

3. CLIN NO.: 0001-0011

4. TASK ORDER NO: ST - 03

5. PROGRAM MANAGER SIGNATURE

STARS Program Manager

6. TECHNICAL REPRESENTATIVE

LTC SORC

U.S. Army Space Command

(719) 555-1234

7. APPLICABLE PARAGRAPHS OF THE STATEMENT OF OBJECTIVES

Paragraphs 1-4

*8. DESCRIPTION OF WORK TO BE PERFORMED (separately identify by task(s))

Spectral Operations Resource Center (SORC)

*9. GOVERNMENT ESTIMATED LEVEL OF EFFORT (separately identify by task(s))

- Not Applicable for Sample Task

*10. DELIVERIES OR PERFORMANCE REQUIREMENTS:

Period of performance is from date of contract award through 31 December 2004.

- See continuation pages.

11. THIS TASK ORDER IS ISSUED PURSUANT TO THE "TASK ORDER PROCEDURES" CLAUSE
OF THE CONTRACT.

SIGNATURE OF CONTRACTING OFFICER

DATE

Carol Alkhafi
Contracting Officer

8. DESCRIPTION OF WORK TO BE PERFORMED: (continued)

8.1 GENERAL INFORMATION/SCOPE: This task order represents all aspects of coordinating, planning and executing the Spectral Operations Resource Center (SORC) task for FY02.

8.1.1 LOCATION OF PERFORMANCE: The location of performance for this task order shall be at the Government facility; i.e., the USARSPACE Spectral Data Processing Center (Bldg. 20,000) or the Spectral Operations Resource Center while located at the contractor's facility, until such time as all Spectral Operations Center (SOC) functions relocate to the new Headquarters, USARSPACE (Building 3) at Peterson Air Force Base (PAFB), Colorado. Software development activities in support of imagery visualization and spectral software support (Subtask 6) shall be performed at the contractor's facility.

8.1.2 REUSE OF MATERIALS: The contractor shall make every effort to utilize existing materials/briefings, to the extent practicable, before developing new materials/briefings.

8.2 Subtask 1 - PROGRAM MANAGEMENT AND ADMINISTRATIVE SUPPORT:

8.2.1 Program Management. The contractor shall manage this task order to ensure efficient, effective accomplishment of all tasks. The contractor shall develop a Task Order Plan (TOP) to accomplish the subtasks outlined in this task order. The contractor shall provide a single point of contact for all related technical and procedural matters. This Project Leader shall be cognizant of all technical elements of this contract and shall be the primary interface with Government management personnel, contract managers, and customer agency representatives and shall ensure that all required documents are properly prepared and delivered on time. Meetings shall be held at frequencies commensurate with the complexity and status of each individual subtask. Deliverables under this subtask include the TOP and revisions as required; monthly Cost and Performance Report, Quarterly Status Reports and Meeting and Conference Minutes, as required.

8.2.2 Administrative Support. The contractor shall provide administrative support in areas such as: word processing, scheduling, database maintenance, document preparation, development of Deliverables, supporting meetings and conferences, and other related administrative and clerical activities in support of and for the duration of this task order, to include code library maintenance and system back-up file maintenance.

8.3 SUBTASK 2 - SPECTRAL RESOURCE SUPPORT:

8.3.1 General. Under direction of the Chief, G-3 Operations Remote Sensing Branch, the contractor shall provide on-site support of remote sensing requirements for the Army Space Support Teams (ARSST), other operational entities within USARSPACE such as the Deputy Chief of Staff, Intelligence (DCSINT), and the Space and Missile Defense Battle Lab (SMDBL). The on-site support shall consist of services to include processing of remotely sensed imagery from multispectral, panchromatic, hyperspectral, radar, and other spaceborne and airborne systems. Imagery shall be processed into usable tactical products, to include both two-dimensional and three-dimensional Space Intelligence Preparation of the Battlefield (SIPB) imagery products, using ERDAS, ARC/INFO, ArcView, ENVI or other USARSPACE-owned processing software.

8.3.2 Base Production Support. The contractor shall create products obtained through the manipulation and/or fusion of DoD-owned and supplied national and commercial imagery data (e.g., Landsat, SPOT, IRS 1-C, SPIN2, IKONOS, CIB, and other digital imagery data) and supplied cartographic data (e.g., Digital Terrain Elevation Data, Digital Feature Analysis Data, Arc Digitized Raster Graphics, Digital Chart of the

World, and vector data for use with ArcInfo, etc.). Data shall be manipulated in ways, which result in accurate representation of militarily significant activities and/or conditions. The contractor shall assure that equipment used in support of this subtask is 100% compatible and interoperable with USARSPACE systems that use imagery products.

8.3.3 Spectral Initiatives Support. This effort will provide on-going capability for the Spectral Operations Resource Center (SORC) to investigate, develop, and transition mature spectral technologies, with a focus on hyperspectral capability to operational users. The contractor shall provide the capability at the SORC to ingest, exploit and disseminate preliminary products built using hyperspectral data to operational users. This effort will focus on using hyperspectral data collected by the Air Force Research Laboratory (AFRL) Sindri satellite with capability to incorporate additional data from space-based hyperspectral imaging satellites, such as Warfighter-1, as they become operational.

8.3.3.1 Imagery Exploitation Initiatives. The contractor shall exploit technology to create products through the manipulation and fusion of DoD-owned and supplied national and commercial HSI data (e.g., HARP, AVIRIS, HYDICE, SEBASS, Sindri) and other digital imagery, GIS, and elevation data. Such exploitation may include the evaluation of data, data fusion techniques, data processing tools, exploitation tools, algorithms, and data collection parameters as directed.

8.3.3.2 Software Beta Test Support. The contractor may be required to evaluate HSI software tools and datasets for deficiencies. The contractor will support beta testing of government-developed software tools or digital processing of non-standard formatted data from HSI airborne and space sensors.

8.3.3.3 HSI Collection Coordination. The contractor may be required to coordinate with Program Managers of hyperspectral data collection assets for access to their data and possibly their taskings.

8.3.3.4 Hyperspectral Architecture. The contractor may be required to design, implement and test the architecture necessary to perform hyperspectral data analysis and dissemination in support of tactical users.

Tactics, Techniques and Procedures (TTPs) Development. The contractor shall develop standard operating procedures and processes (TTPs) for exploiting and disseminating hyperspectral data for different applications (i.e., terrain analysis, target detection/identification) for tactical users. These TTPs shall be tailored for use during deployments of the Mobile Processing, Exploitation, Dissemination (MoPED) van or Eagle Vision II van, as tasked.

8.3.3.6 Data Collection Support. The contractor may be required to assist USARSPACE participation in DoD HSI data collections with field site data processing, atmospheric data and sensor calibration support, operation of ground (handheld) spectroradiometers, or other activities preceding digital imagery processing operations.

8.3.4 Deployed/Mobile Spectral Operations Support. The contractor shall support deployed mobile spectral operations such as the Mobile Processing, Exploitation, and Dissemination (MoPED) van, the Eagle Vision II (EVII) van, ARSST augmentation, or the STEEL IRIS – Distributed Common Ground Station (DCGS) Project with imagery processing operators, as required. The contractor shall provide this deployed support on an as-needed basis and actively pursue alternative strategies with the Technical Representative (TR) should such support negatively impact base support operations.

8.3.5 Surge Support. During normal operations, the USARSPACE and Contractor sites shall be operated during USARSPACE duty hours (0730 to 1630 hours, Monday through Friday) throughout the period of performance. Additional duty time may be required by exercises and operations. Operational surge support includes the augmentation of tactical forces and deployment of USARSPACE military personnel to support Army operations and/or exercises. The contractor shall provide special reports, as determined by the Technical Monitor, under all subtasks without impacting the base processing capabilities required under this task.

8.4 SUBTASK 3 - VISUALIZATION & SPECTRAL SOFTWARE SUPPORT:

8.4.1 General. The contractor shall provide visualization and spectral software support of USARSPACE spectral operations initiatives. The contractor shall provide expertise in using and exploitation of cutting-edge technologies related to image processing with emphasis on hyperspectral imagery (HSI) and radar data.

Visualization Software Support. The contractor shall support the presentation of standard, tailored, fused, or prototype imagery products in COTS and GOTS visualization software (EDGE, EDGEViewer, BattleScape NT) employed by the USARSPACE 1st Space Battalion ARSST, FA 40 staff officers, or SMDBL technology demonstrations, as directed. The contractor shall recommend the direction of current (EDGE, EDGEViewer, BattleScape NT) or future tools and to aid in the design and development of critical software modules or to design graphic user interfaces (GUI) as directed.

8.4.3 Spectral Software Support. The contractor may be required to use existing USARSPACE software macro-language tools ((ERDAS Macro Language (EML), ARC Macro Language (AML), Interactive Data Language (IDL), Avenue, and Designer)) to add value to current MSI tools, such as providing scripted applications. The contractor may be tasked to conduct follow-on development of the Semi-Automated Plug-In Tool For Feature Identification, Recognition and Extraction (SPITFIRE) tool beyond the FY01 Phase II scope.

8.4.3.1 Macro-Language / Fused Product Development. The contractor may be required to use existing USARSPACE software macro-language tools including AML, EML, or IDL to add value to current HSI tools or develop prototype fused HSI/GIS products.

8.4.3.2 Tailored Applications Support. The contractor may be required to provide specific tailored applications with NT-based decision support tools.

SUBTASK 4 - SPECTRAL SYSTEMS TRAINING SUPPORT

8.5.1 General. The contractor shall provide visualization and spectral software training support of USARSPACE spectral operations and initiatives to USARSPACE government personnel. The contractor shall provide applications expertise with ERDAS Imagine or ENVI imagery processing software, EDGE Product Family or derivative GOTS products such as EDGEViewer. Formal, recurring training, and the maintenance of commercial training or software release documentation will be provided in accordance with commercial software supplier licensing agreements or by separate contract, as required.

8.5.2 Operational Applications Support. The contractor shall support limited training of government personnel on the Multispectral Imagery Processor (MSIP), or the Space Support System (SSP). The contractor may also be required to conduct limited troubleshooting and problem solving in relation to these systems.

8.5.3 HSI Training Support. The contractor may be required to support limited training of government personnel on HSI processing techniques, equipment, or software tools (e.g., ENVI, SEARCH, or other commercial HSI-specific software). The contractor may also be required to conduct limited troubleshooting and problem solving in relation to these systems.

Visualization Software Training Support. The contractor shall provide applications expertise with ERDAS Imagine or ENVI imagery processing software, EDGE Product Family or derivative GOTS products such as EDGEViewer. The contractor will provide limited software troubleshooting, coordination and interface support with commercial software developers and convey USARSPACE/SMDBL desired enhancements or requirements on behalf of the Government to the commercial software developer(s). Formal, recurring training, and the maintenance of commercial training or software release documentation will be provided in accordance with commercial software supplier licensing agreements or by separate contract, as required.

8.5.6 IRIS Printer Training Support. The contractor shall provide hands-on user cross-training for all

SORC personnel in daily, weekly, and monthly IRIS operator-level maintenance.

8.6 SUBTASK 5 - OTHER TECHNICAL SUPPORT

8.6.1 General. The contractor shall provide other technical support of USARSPACE Spectral Operations initiatives. Such support shall include providing planning and augmentation of spectral demonstrations, providing IRIS printer maintenance support, providing archiving, database and web development/management support, providing system administration support, and providing spectral education, advocacy, and staffing support to spectral operations or initiatives.

8.6.2 Planning and Demonstration Augmentation Support. As directed, the contractor shall support or augment USARSPACE and/or SMDBL spectral demonstrations in all aspects of planning for demonstrations, exercises, and experiments. Planning for the project shall include research, analysis, coordination, demonstration and integration of commercial and military satellite imagery and mapping products used by U.S. Army personnel in support of military operations. Planning and support may include space sensors such as, the Army Night Vision Research Lab's Hyperspectral Airborne Reconnaissance Program (HARP), National Aeronautics and Space Administration (NASA) Airborne/Visible Infrared Imaging Spectrometer (AVIRIS), DoD's Hyperspectral Digital Imagery Collection Experiment (HYDICE), Navy Littoral Airborne Sensor/Hyperspectral (LASH), Naval Earth Map Observer (NEMO), DoD Spatially Enhanced Broadband Array Spectrograph System (SEBASS), Navy Tactical Real-Time Image Processing System (TRIPS), and Air Force Sindri or Warfighter-1 satellites.

8.6.3 IRIS Printer Support. The contractor shall provide operator-level maintenance for two GFE IRIS 3047 large-format color printers. Parts Replacements. When a failure of either printer occurs, the contractor shall provide all necessary replacement parts and labor required to ensure expeditious return to service. This service will be provided as a fixed-price Other Direct Cost under this Task Order.

8.6.4 Archiving, Database and Web Development/Management Support. The contractor shall be proficient in current Microsoft Access database and be able to enter new data and find existing data. The contractor shall also manage the near-line optical library and maintain the disks used for storage of data. The contractor will make recommendations regarding the efficient cataloging and storage of the archival media to assure security, accessibility, and protection from environmental damage. The contractor shall assist in recommending improvements, integrating separate Access modules, or integrating an underpinning Relational Database Management System (RDBMS) structure. The contractor shall assist with any other database arrangements that USARSPACE may pursue such as the sharing of metadata holdings or interoperability of records with other imagery agencies such as NIMA, EROS Data Center (EDC), or U.S. Army Topographic Engineering Center (TEC). The contractor may be required to support minor technical integration required for database support and website maintenance, and may be required to coordinate with other contractors to support, or gain technical understandings of, various technical integration efforts to include SIPRNET connectivity.

8.6.5 System Administration Support. The contractor shall provide system administration support to deployed and operational imagery processing systems as tasked.

8.6.6 Spectral Education, Advocacy, and Staffing Support. As directed, the contractor shall contact, coordinate on behalf of, or represent USARSPACE directly, within spectral working groups, or indirectly with other government agencies [e.g., the Central Measurements and Signatures Intelligence (MASINT) Organization (CMO), Air Force Research Laboratory (AFRL), Naval Space Command (NAVSPACECOM), Space Warfare Center (SWC), Environmental Protection Agency (EPA), or the Spectral Information Technology Application Center (SITAC)], involved in HSI technology research or exploitation. The contractor may also be required to participate in Army, DoD and civil meetings and spectral conferences related to this task order of interest to USARSPACE and the Army. The contractor may also be required to review technical and programmatic studies, reports and surveys, and provide verbal or written reports regarding content and recommended course(s) of action. The contractor shall also provide support in the preparation of spectral-related technical papers, presentations, conference minutes, after action reviews, trip reports, related briefings/ information papers, agendas, miscellaneous reports, and

issue papers as required.

8.6.7 Transition Assistance in Move to HQ, USARSPACE, Building 3. The contractor may be required to support the orderly transition of critical spectral operations from the present facilities in Building 20,000 and the contractor facility to the new HQ, USARSPACE, Building 3 at Peterson Air Force Base. Such support may include planning, coordination on behalf of the government with other civilian and government contractor agencies, assistance with shut-down, preparation for movement, and set-up of hardware when delivered to the new site. The contractor shall advise on the best sequence and means to mitigate disruption of spectral operations and imagery production support during the scheduled move from old to new facilities.

8.7 PERSONNEL REQUIREMENTS: The contractor shall provide full-time, on-site technical personnel who meet the following minimum qualifications. Full-time personnel proposed (and accepted) shall support this effort for the life of the Task Order. Replacements shall not be made without prior coordination with the Government representative.

8.7.1 Spectral Resource Support for Subtask 2.

(1) Formal training in ERDAS Imagine Image Processing Software and ESRI Arc Info or ArcView GIS software.

(2) Experience with processing spectral data from panchromatic and multispectral sensors in a UNIX or Windows NT environment.

(3) Experience in creating fused spectral data products.

(4) Ability to develop spectral products in support of Army Terrain Analysis and/or Intelligence Preparation of the Battlefield.

(5) Active duty Army tactical experience is highly desired.

8.7.2 Visualization and Spectral Software for Subtask 3.

(1) Proficient in the use of EDGE Product Family and derivative GOTS software.

(2) Experience in supporting military visual applications desired.

8.7.3 Other Technical Support for Subtask 5

IRIS Printer Support. Proficiency in daily, weekly, and monthly IRIS operator level maintenance. IRIS factory maintenance certification.

Archiving, Database and Web Development Support. Possessing familiarization with military GIS and terrain applications, Microsoft Access Database Management experienced, and able to support basic imagery processing if required.

System Administration Support. Support SGI and SUNSparc hardware and ethernet backbone for the Local Area Net utilized in both the current and planned USARSPACE Spectral Operations facilities.

Spectral Education, Advocacy, and Staffing Support. Represent the government in written or oral communications before the Army spectral community. Active duty Army tactical experience is highly desired.

8.8 SECURITY CLEARANCES: All personnel supporting this task order shall have SECRET clearances.

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